

## VARIANCE OF THE MEAN

### PURPOSE

Compute the variance of the mean of a variable.

### DESCRIPTION

The variance of the mean is:

$$VMEAN = \frac{s^2}{N} \quad (\text{EQ 2-18})$$

where  $s$  is the standard deviation of the variable and  $N$  is the number of observations.

### SYNTAX

LET <par> = VARIANCE OF THE MEAN <y> <SUBSET/EXCEPT/FOR qualification>

where <y> is a response variable;

<par> is a parameter where the computed variance of the mean is saved;

and where the <SUBSET/EXCEPT/FOR qualification> is optional.

### EXAMPLES

LET VARM = VARIANCE OF THE MEAN Y1

LET VARM = VARIANCE OF THE MEAN Y1 SUBSET TAG > 2

### DEFAULT

None

### SYNONYMS

VARIANCE OF MEAN

VARIANCE MEAN

### RELATED COMMANDS

VARIANCE OF THE MEAN PLOT = Generates a variance of the mean versus subset plot.

MEAN = Compute the mean of a variable.

VARIANCE = Compute the variance of a variable.

STANDARD DEVIATION = Compute the standard deviation of a variable.

### APPLICATIONS

Data Analysis

### IMPLEMENTATION DATE

94/2

### PROGRAM

LET Y1 = NORMAL RANDOM NUMBERS FOR I = 1 1 100

LET SD = VARIANCE OF THE MEAN Y1